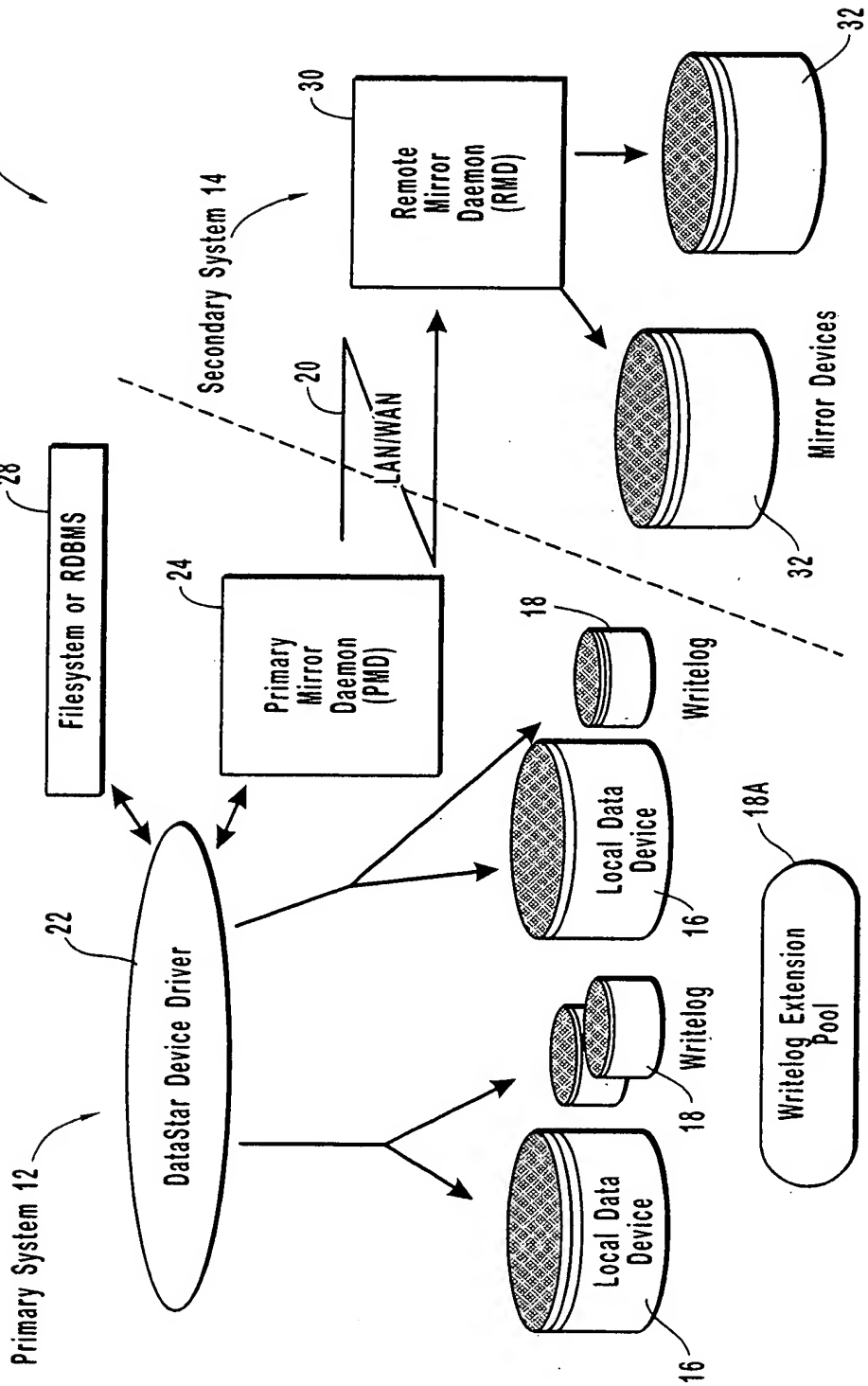

10
Primary System 12
DataStar Device Driver
22
Filesystem or RDBMS
28
Primary Mirror Daemon (PMD)
24
20
LAN/WAN
Secondary System 14
Remote Mirror Daemon (RMD)
30
32
Mirror Devices
32
18
Writelog
Local Data Device
16
18A
Writelog Extension Pool
Writelog
18
Local Data Device
16

Figure 1

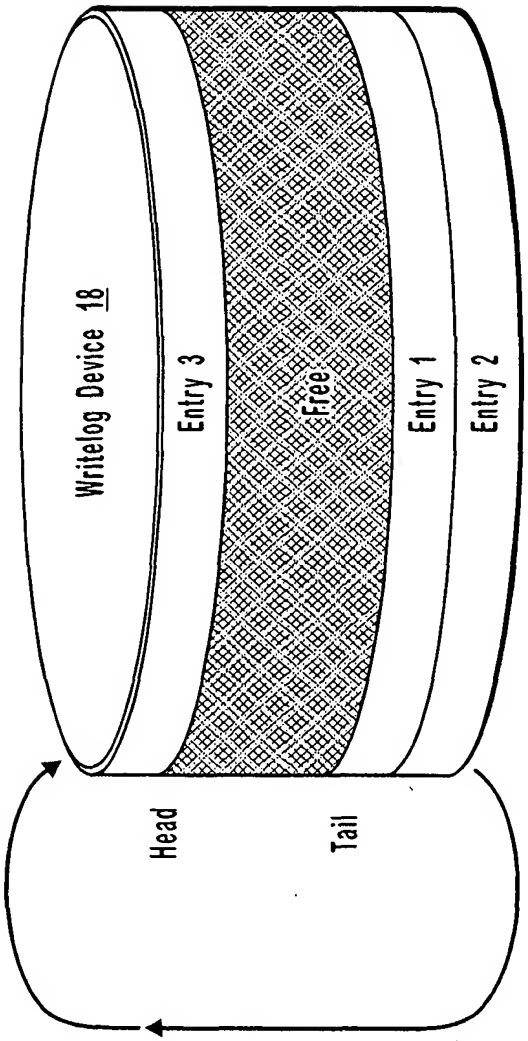


Figure 2

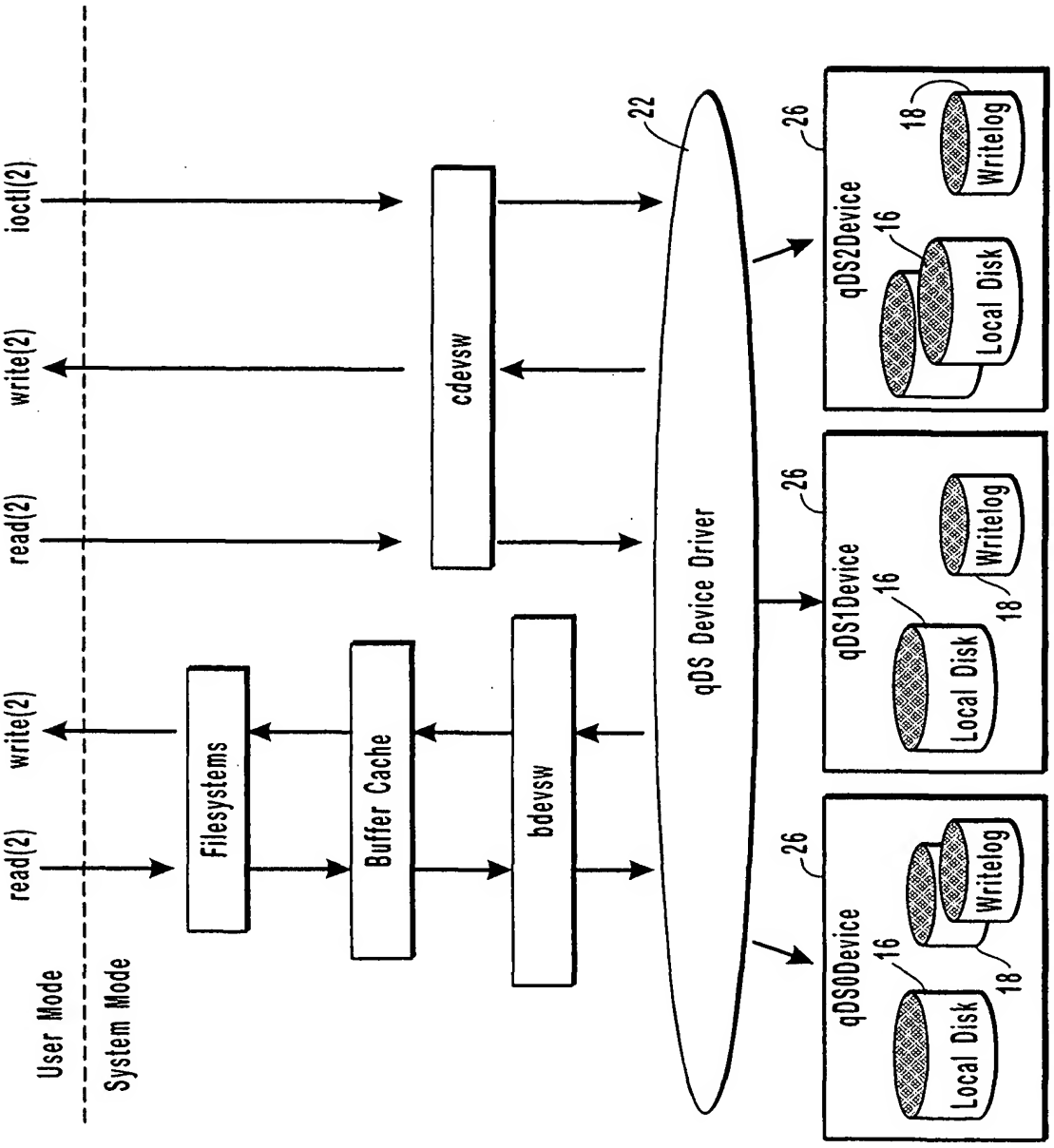

User Mode
System Mode
read(2)
write(2)
Filesystems
Buffer Cache
bdevsw
read(2)
write(2)
ioctl(2)
cdevsw
22
qDS Device Driver
26
qDS0Device
16
Local Disk
18
Writelog
26
qDS1Device
16
Local Disk
18
Writelog
26
qDS2Device
16
Local Disk
18
Writelog

Figure 3

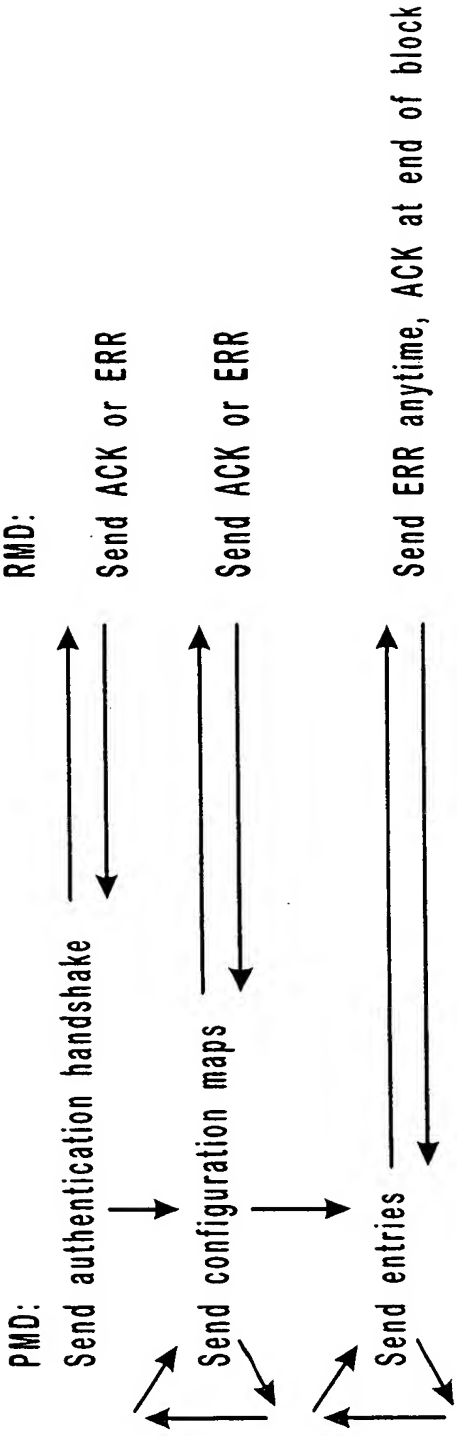

PMD:
RMD:
Send authentication handshake
Send ACK or ERR
Send configuration maps
Send ACK or ERR
Send entries
Send ERR anytime, ACK at end of block

Figure 4

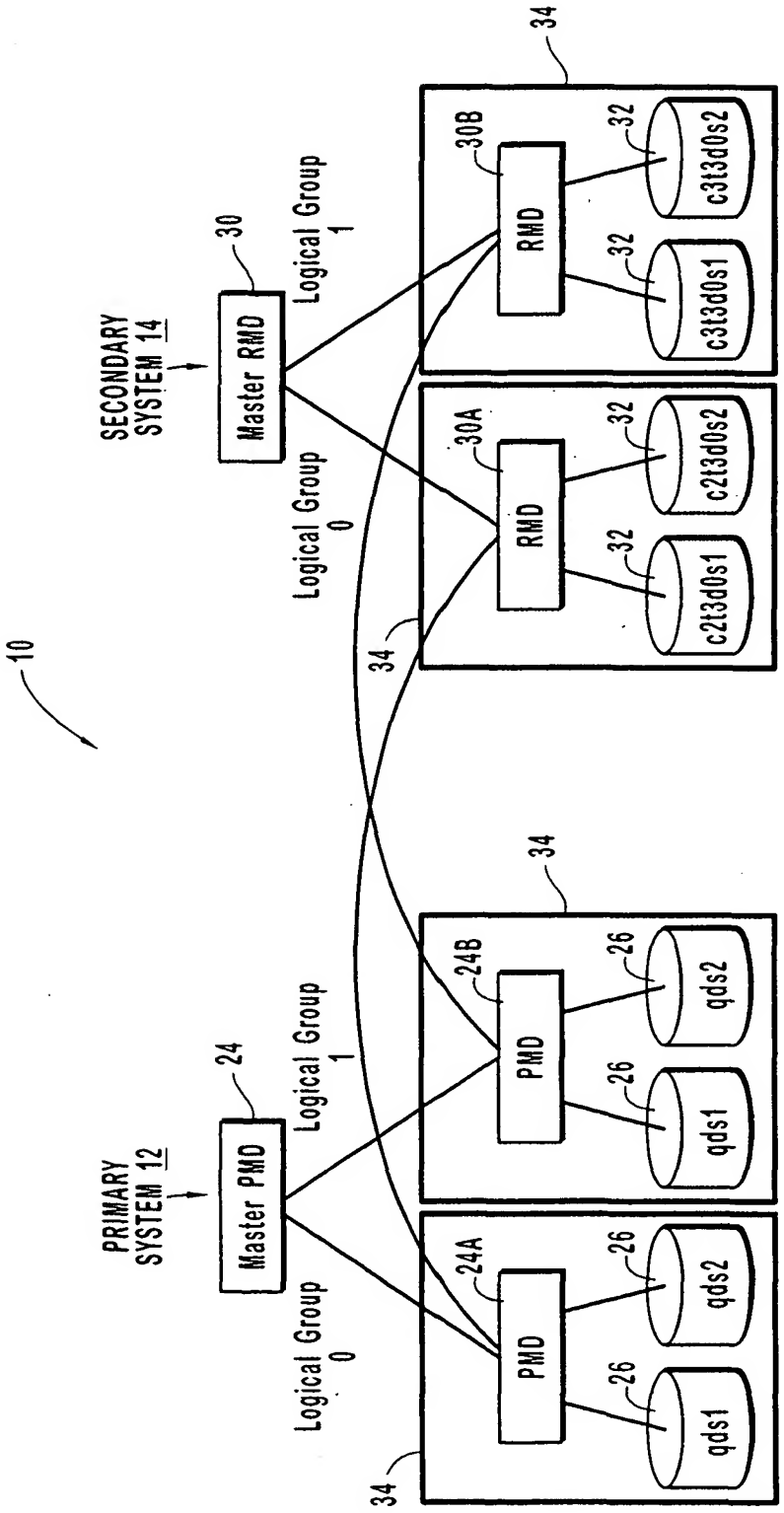

10
PRIMARY SYSTEM 12
SECONDARY SYSTEM 14
Master PMD
24
Master RMD
30
Logical Group 0
Logical Group 1
PMD
24A
24B
RMD
30A
30B
qds1
qds2
c1t3d0s1
c1t3d0s2
c2t3d0s1
c2t3d0s2
c3t3d0s1
c3t3d0s2
26
32
34

Figure 5

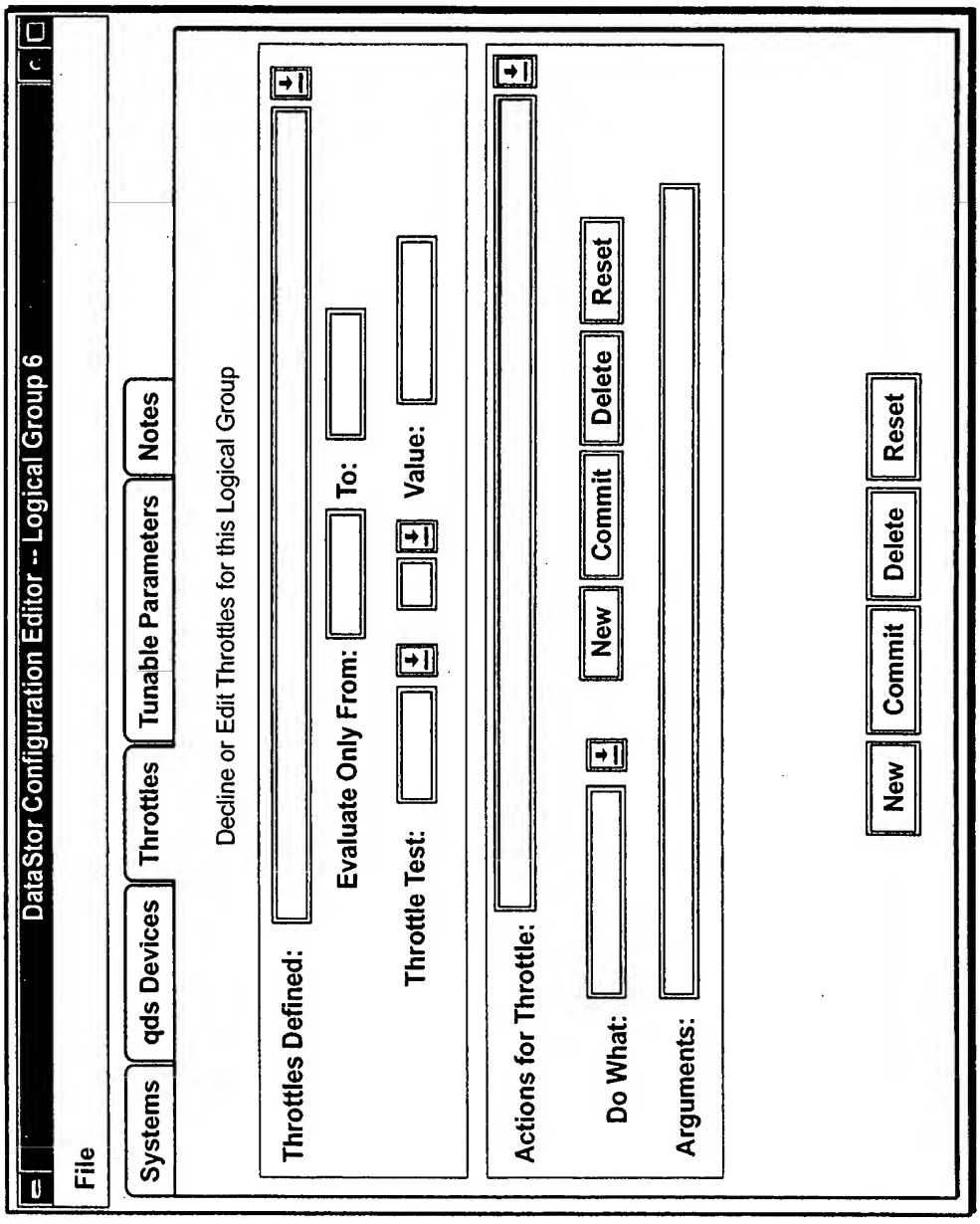

DataStor Configuration Editor -- Logical Group 6
File
Systems
qds Devices
Throttles
Tunable Parameters
Notes
Decline or Edit Throttles for this Logical Group
Throttles Defined:
Evaluate Only From:
To:
Throttle Test:
Value:
Actions for Throttle:
Do What:
New
Commit
Delete
Reset
Arguments:
New
Commit
Delete
Reset

Figure 6

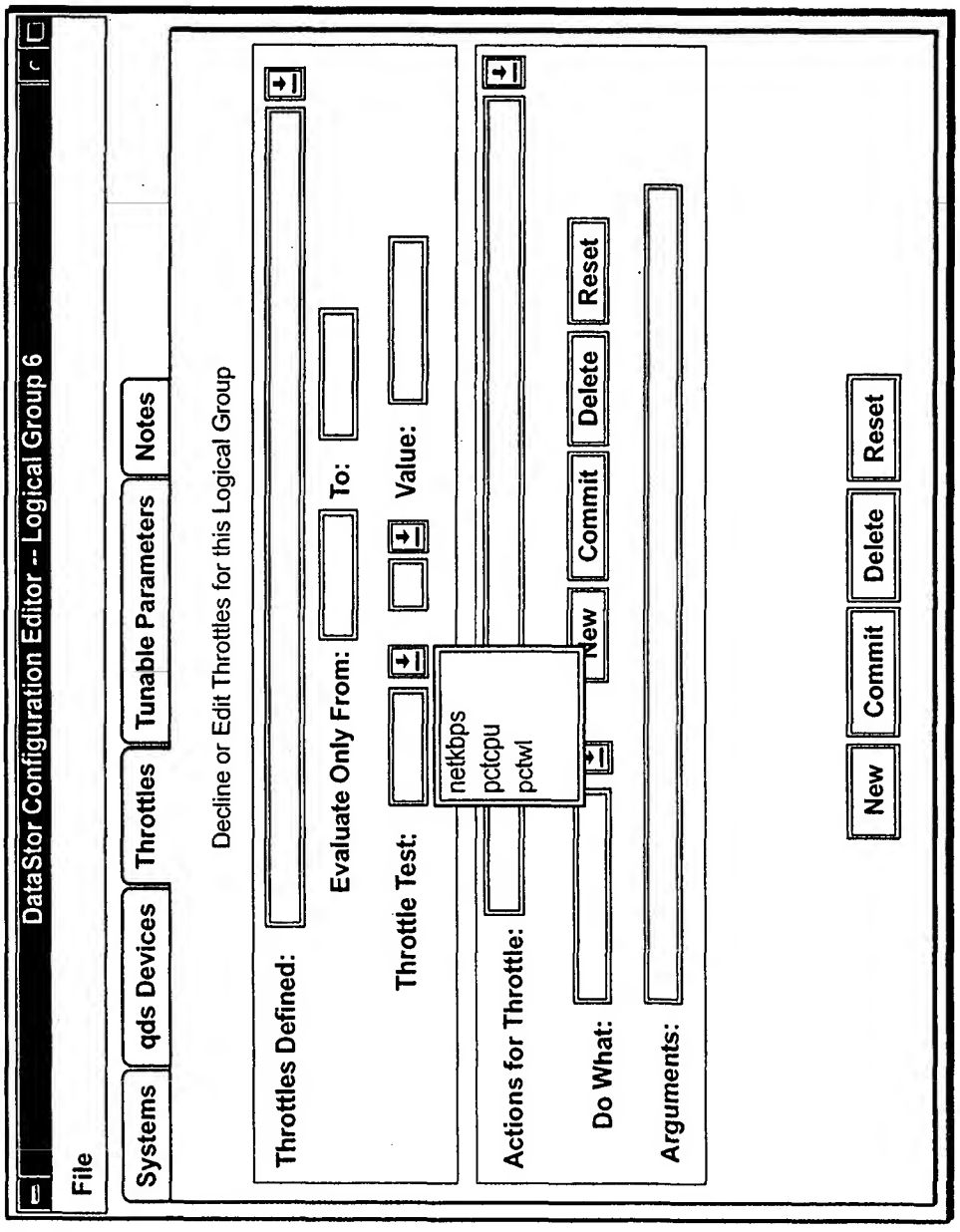

DataStor Configuration Editor -- Logical Group 6
File
Systems
qds Devices
Throttles
Tunable Parameters
Notes
Decline or Edit Throttles for this Logical Group
Throttles Defined:
Evaluate Only From:
To:
Throttle Test:
Value:
netkbps
pctcpu
pctwl
Actions for Throttle:
Do What:
New
Commit
Delete
Reset
Arguments:
New
Commit
Delete
Reset

Figure 7

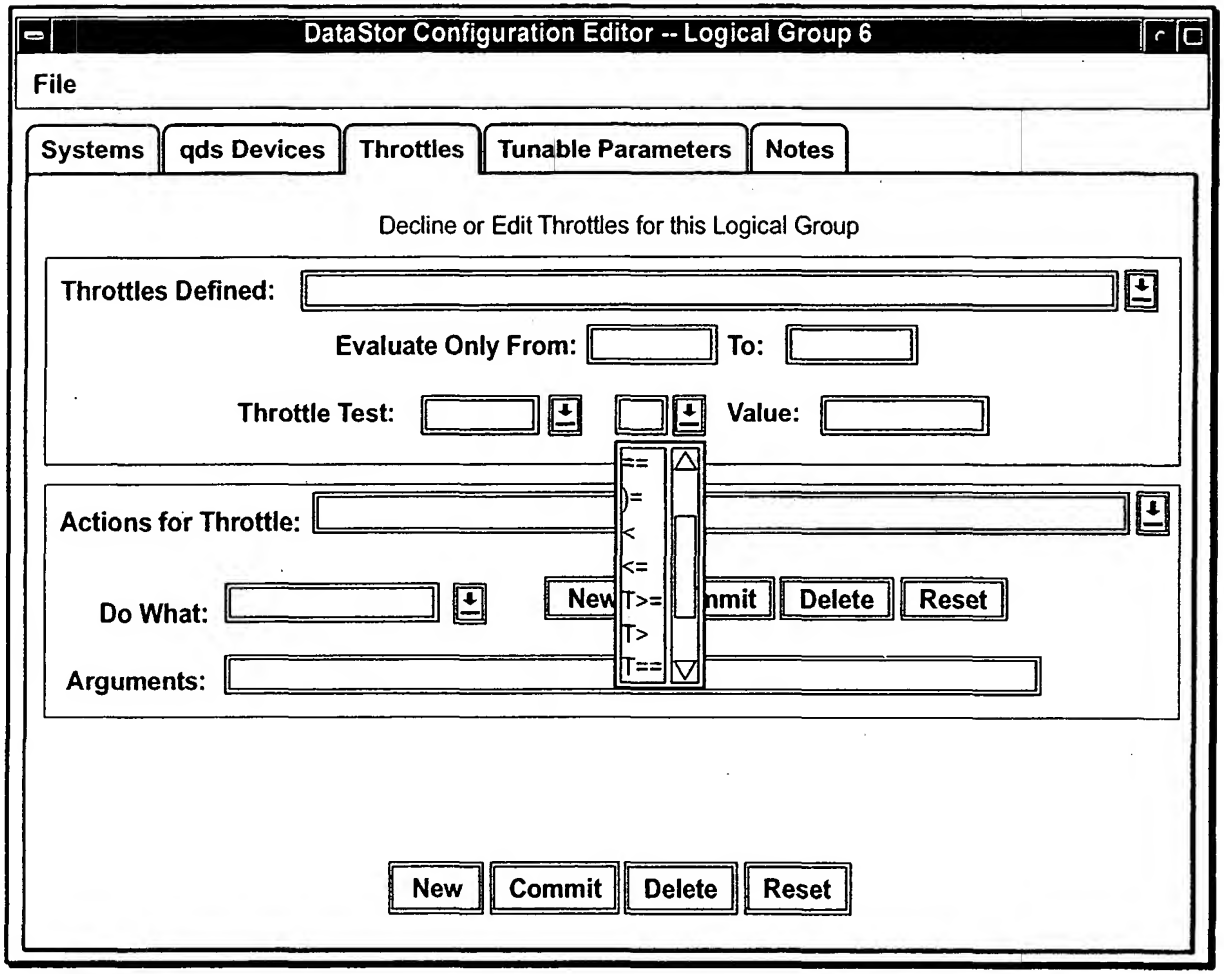

DataStor Configuration Editor -- Logical Group 6
File
Systems
qds Devices
Throttles
Tunable Parameters
Notes
Decline or Edit Throttles for this Logical Group
Throttles Defined:
Evaluate Only From:
To:
Throttle Test:
Value:
==
=
<
<=
T>=
T>
T==
Actions for Throttle:
Do What:
New
nmit
Delete
Reset
Arguments:
New
Commit
Delete
Reset

Figure 8

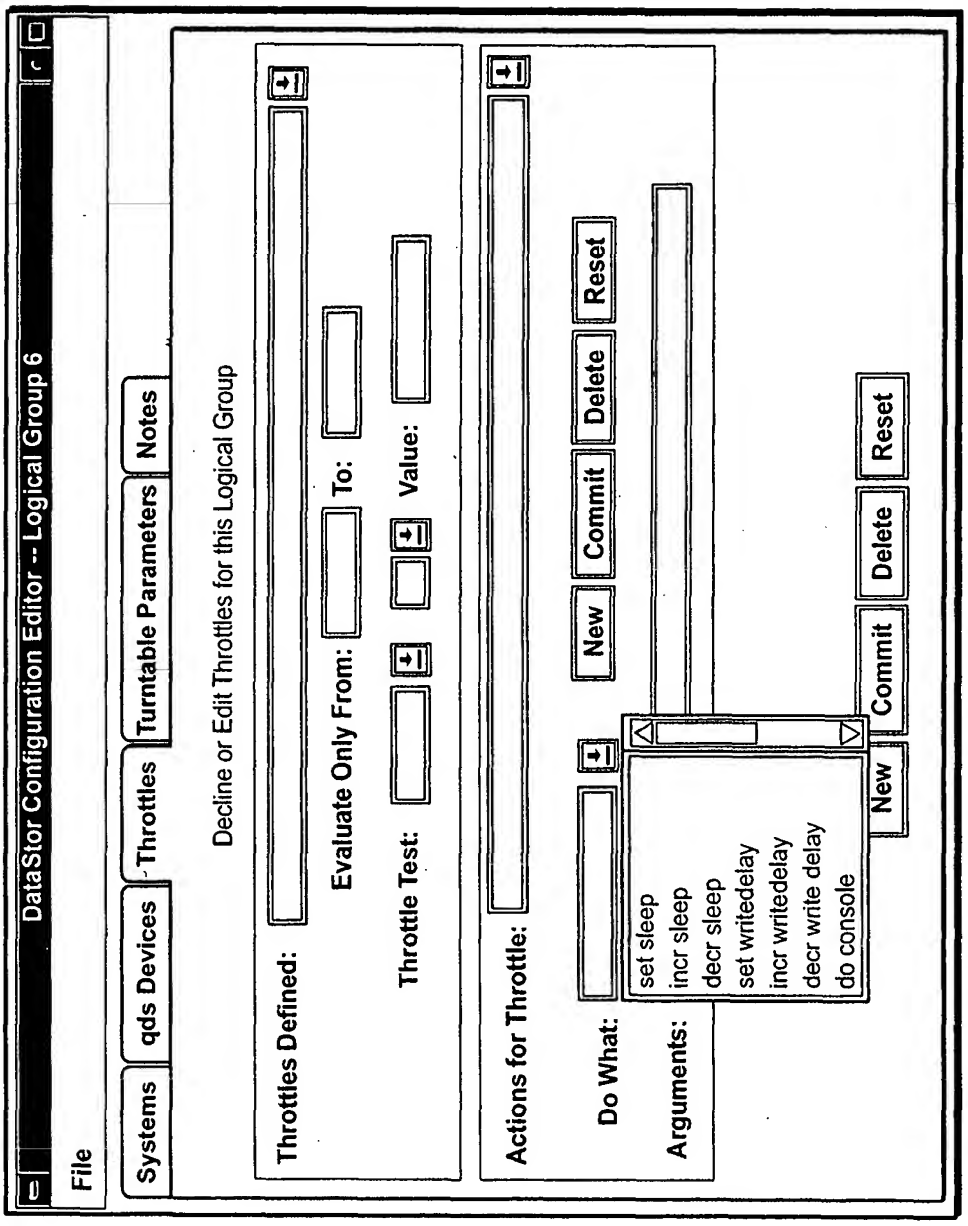
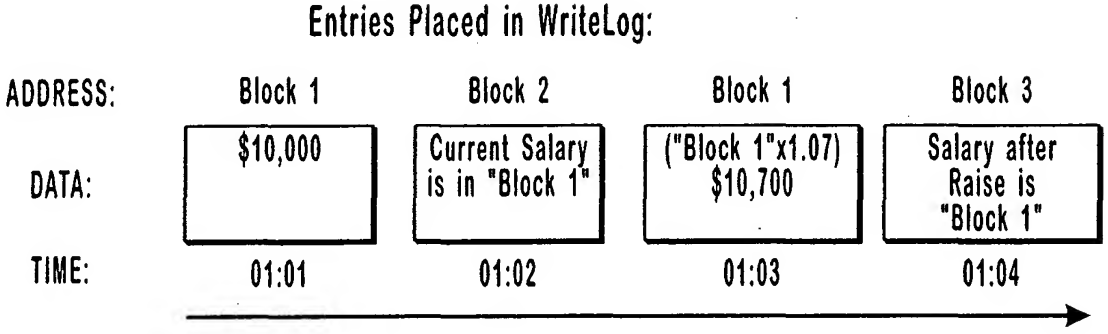

DataStor Configuration Editor -- Logical Group 6
File
Systems
qds Devices
Throttles
Turntable Parameters
Notes
Decline or Edit Throttles for this Logical Group
Throttles Defined:
Evaluate Only From:
To:
Throttle Test:
Value:
Actions for Throttle:
Do What:
New
Commit
Delete
Reset
Arguments:
set sleep
incr sleep
decr sleep
set writedelay
incr writedelay
decr write delay
do console
New
Commit
Delete
Reset

Figure 9

```
THROTTLE 08:00:00 18:00:00 netkbps T>= 200
ACTIONLIST
  ACTION: set sleep 15000
  ACTION: do console Net traffic exceeded 200KBps (now %%KBPS%%KBps)
  ACTION: do console Slowing PMDs for logical group %%GROUPNO%%  (sleep now %%SLEEP%%ms)
  ACTION: do mail root Net traffic exceeded 200KBps (now %%KBPS%%KBps, sleep now %%SLEEP%% usecs)
  ACTION: do exec /home/dave/bin/wally Net traffic exceeded 200KBps (now %%KBPS%%KBps, sleep now %%SLEEP%%
usecs)
ENDACTIONLIST

THROTTLE 08:00:00 18:00:00 netkbps > 300
ACTIONLIST
  ACTION: incr sleep 5000
  ACTION: do console Net traffic high (%%KBPS%%KBps)
  ACTION: do console Slowing PMDs for logical group %%GROUPNO%%  (sleep now %%SLEEP%% usecs)
  ACTION: do mail root Net traffic high: now %%KBPS%%KBps, (sleep now %%SLEEP%% usecs)
ENDACTIONLIST

THROTTLE 08:00:00 18:30:00 netkbps T < 175
ACTIONLIST
  ACTION: decr sleep 5000
  ACTION: do console Net traffic slowing. Now %%KBPS%%KBps
  ACTION: do console Speeding up PMDs for logical group %%GROUPNO%%  (sleep now %%SLEEP%% usecs)
  ACTION: do mail root Net traffic slowing. Now %%KBPS%%KBps, (sleep now %%SLEEP%% usecs)
ENDACTIONLIST

THROTTLE 08:00:00 18:00:00 netkbps < 150
ACTIONLIST
  ACTION: decr sleep 15000
  ACTION: do console Net traffic low (%%KBPS%%KBps). Sleep set to %%SLEEP%% usecs.
ENDACTIONLIST

THROTTLE 18:31:00 23:59:59 netkbps < 500
ACTIONLIST
  ACTION: set sleep 0
ENDACTIONLIST

THROTTLE 00:00:00 07:59:59 netkbps < 500
ACTIONLIST
  ACTION: set sleep 0
ENDACTIONLIST
```

Figure 10



Chronologic Coherency Method:

Block 1: $10,000
Block 2: Current Salary is "Block 1"\
Block 1: $10,700
Block 3: Salary after Raise is "Block 1"

Read from Data Disk Method:

Block 1: $10,700
Block 2: Current Salary is "Block 1"\
Block 1: $10,700
Block 3: Salary after Raise is "Block 1"

Figure 11

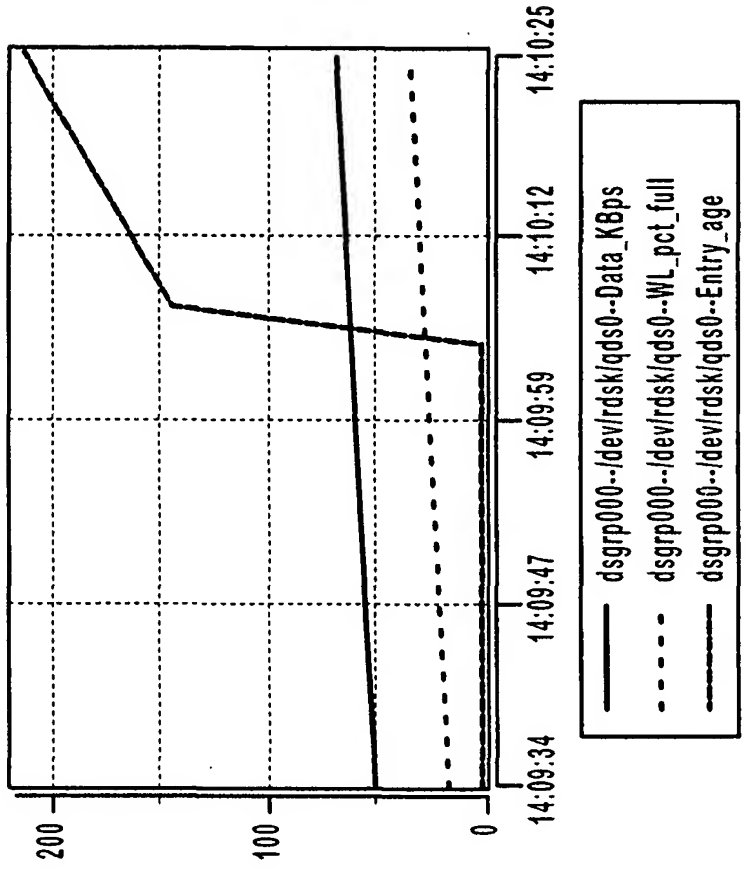

200
100
0
14:09:34
14:09:47
14:09:59
14:10:12
14:10:25
dsgrp000--/dev/rdsk/qds0--Data_KBps
dsgrp000--/dev/rdsk/qds0--WL_pct_full
dsgrp000--/dev/rdsk/qds0--Entry_age

Figure 12